

A MANUAL OF BIRD STUDY

A Description of
Twenty-five Local Birds with Study Outlines

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School Service Series—Number One
Third Edition, March, 1934

Department of Education
American Museum of Natural History
77th Street and Central Park West
New York City

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CIRCULATING NATURE COLLECTIONS OF BIRDS IN THE AMERICAN MUSEUM OF NATURAL HISTORY

This Bird Study Manual is intended especially for the use of teachers and pupils in the New York City Schools. It is written primarily to describe the birds contained in the circulating nature study collections which the American Museum of Natural History loans to public schools. However it may be used as a general guide to bird study as well. The various study outlines tell the story of different projects that may be developed in connection with birds. Typical birds are illustrated. As much as is possible in the life history of each bird is given. The bird poems may be used in connection with the study of English. The study of birds may very well be correlated with the studies of many other subjects such as Civics, Geography and other topics.

The purpose of the loan collections of birds and other animals in the American Museum of Natural History is to place in the hands of teachers good material for classroom instruction. At the same time authoritative data is given with each collection. These loan collections are available for any teacher in any school in Greater New York.

The method of obtaining these collections has been made the simplest possible as far as the teachers are concerned. At least once a year (in September), and sometimes twice a year, a return postal card is mailed to every school principal in the City system. All that the principal has to do to obtain the collections is to indicate by numerals the sequence in which he wants the collections delivered, signing his name and school number. The Museum messengers will then deliver the collections, and call for them, without any more effort on the part of the schools. The entire cost of this service is borne by the Museum.

Teachers are urged, whenever possible, to bring their classes to the American Museum of Natural History, at 77th Street and Central Park West, to take advantage of the opportunities for further study that are offered. In the many halls of birds and animals, the home life and the general habitat of the creatures are given in detail. There is a free guide service for teachers and pupils. Also there are classes for school children held in the new

School Service Building. In fact, the wealth of natural history study material is always there, available in many ways for the use of all who desire to further their knowledge of the animals of the out-of-doors.

Applications for these collections and for further information should be addressed to The American Museum of Natural History, 77th Street and Central Park West, New York City.

GEORGE H. SHERWOOD, *Curator-in-Chief*
Department of Public Education

The American Museum of Natural History has five collections of birds to lend to Public Schools. These five are:

THE BLUEBIRD SET

Bluebird—Phoebe—Barn Swallow—House Wren—Chimney Swift.

THE OWL SET

Chickadee—Nuthatch—Song Sparrow—Screech Owl—Kinglet.

THE ROBIN SET

Robin—Red-winged Blackbird—Baltimore Oriole—Chipping Sparrow—Meadowlark.

THE BLUE JAY SET

Blue Jay—Downy Woodpecker—Starling—Junco—English Sparrow—Crossbill.

THE SCARLET TANAGER SET

Scarlet Tanager—Red-eyed Vireo—Goldfinch—Hummingbird—Pigeon.

OTHER TYPES OF LOAN COLLECTIONS THAT MAY BE SECURED ARE:

Insects—Sponges and Corals—Crustaceans—Minerals and Rocks—Native Woods—Starfishes and Worms—Mollusks.

SUGGESTIONS FOR TEACHERS

It is sometimes helpful to study birds by the "Question and Answer" method. The following questions are written to suggest others of a similar nature.

WHAT IS A BIRD? A bird is an animal that has feathers. No other animal has feathers.



A "CITY" OF STRANGE BIRDS

Some of the brightest spots in childhood are connected with a vague realization of the beauty and mystery of the world.

Date _____ 19__

To the Curator, Department of Public Education
American Museum of Natural History

Dear Sir: Kindly deliver the Circulating Collections to my school in the sequence I have indicated below.

Principal

<i>School</i>	<i>Through</i>	
Native Birds	Oral Set	Blue Box Set
	Robin Set	Blackbird Set
Mollusks	Native Woods	Special Insects
Crabs	Insects	Starfishes and Worms
Sponges and Corals	Economic Insects	Minerals and Rocks
	Small Mammals	
Public Health	Special and Prevention of Commercial Diseases	
Fossils	Insects and Diseases	
	Bacteria and their Work in the World	

Principal

Public School No. _____

THIS SIDE OF CARD IS FOR ADDRESS

STAMP

THE ORDER POSTCARD

Requisitioning the service has been simplified to the nth degree. All that a principal needs to do to obtain the collections is to indicate by numerals the sequence in which he wants them delivered.

WHAT ARE FEATHERS USED FOR? Feathers help to keep the bird warm. With the aid of feathers the bird flies.

WHAT OTHER CREATURE IS ABLE TO FLY WITHOUT THE AID OF FEATHERS? The bat can fly upon wings of thin skin.

WHAT ARE THE NAMES OF SOME BIRDS THAT ARE NOTED FOR THEIR ABILITY TO SWIM, FLY, CREEP, AND WALK? The Bald Eagle and the Condor are both birds that are very strong fliers. Can you name any others? The ducks are at home in the water. Can you name any other birds that are able to swim with ease? The little Brown Creeper and many other birds are very happy in their ability to creep up and to climb trees. The Chicken and the Partridge are both excellent walkers. Name some other birds that walk.

WHAT BIRDS HELP THE TREES TO LIVE BY KILLING HARMFUL INSECTS? The Woodpeckers help the trees in this way. Name some other birds that find food upon the trunks of trees.

WHAT MAY WE ATTEMPT TO DO TO PROTECT BIRDS? We may help birds to live by giving them drinking places and bird baths in the Summer, and food tables in the Winter. We can help by not going near birds' nests and by not harming birds in any manner.

SUGGESTIONS TO TEACHERS AND PUPILS

ADDITIONAL STUDY TOPICS

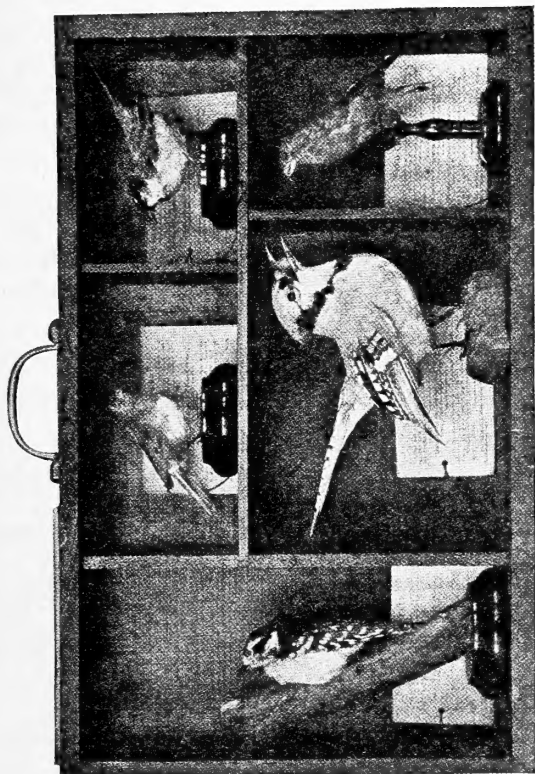
Birds are to be found in almost "every corner of the earth." Their study has a world wide interest and appeal. The following list is intended to serve as an aid in bringing to mind subjects that may be developed out-of-doors, or studied in the class room.

VISION OF BIRDS: The keen power of sight of Hawks and Eagles; the Owl's eye at night.

VARIATION IN STRUCTURE OF BILL: Adaptations of the sharp pointed, curved beak of the flesh-eating Hawks; the small, pointed bill of the insect-eating Warbler.

VARIATION IN STRUCTURE OF FEET: The strong grasping talons of flesh-eaters; the powerful "walking feet" of the Chicken; the perching feet of the Chickadee.

HABITS OF CLEANLINESS IN BIRDS: Cleaning nests, bathing in water and dust.



A NATURE-STUDY COLLECTION—THE BLUEJAY SET

The specimens are delivered to the school in a wooden carrying case about the size of an ordinary suitcase. The birds are mounted on individual pedestals and can easily be removed from the case. Thus the specimens may be used singly or collectively. They can be handled and seen from all sides.

THE FLIGHT OF BIRDS: Powerful, sustained flight of the Condor; darting flight of flycatchers; suspension in air, or hovering flight of the Hummingbird and Sparrow Hawk.

MIGRATION OF BIRDS: Travels from one continent to another, often over wide expanse of water; journey of the Golden Plover.

TRAINING OF YOUNG BIRDS BY THEIR PARENTS: Young Barn Swallows forced into the air; Robins offering food to young and thus enticing them to leave the nest.

THE SONGS OF BIRDS: The Parrots, Thrushes, Sparrows. Songs of male birds during breeding season, imitation and mimicry—Catbird; warning cries, call-notes.

CARE AND FEEDING OF YOUNG: Different methods employed by parents. The Pelican, the Robin, the Swallows, the Flicker.

TYPES OF NESTS: Construction, materials used, building location; nest of Bank Swallow, hanging nest of Baltimore Oriole, Crow's nest.

WEAPONS OF FIGHTING: Spurs, wings, bills, talons.

PROTECTIVE COLORATION: Similarity of plumage, color and markings to habitat.—the Wood Thrush, the Partridge.

BIRD HOUSES: Different types, how made, how placed, how used.

BIRD CONSERVATION: Methods of preservation in various states. Laws for protection.

RELATION OF BIRDS TO AGRICULTURE: Insect eaters, seed eaters' rodent destroyers.

THE BIRD'S FEATHER: Feathers for study will be given to teachers upon request.

(Note). These are but a few of the subjects that might very well be considered.

OUTLINE FOR BIRD STUDY

(Suggestions to Teachers and Pupils)

In observing birds out-of-doors or in the class room, with an idea of studying or identifying them, there are certain definite things to know and to remember. The following outline makes some suggestions of what to look for when a bird is seen for the first time, or when you are studying a mounted specimen or colored picture.

MOVEMENTS: See whether the flyer hops or walks when it is on the ground. Does it hang upside down, move slowly or quickly, swim or creep? Remember that the same bird may have a different appearance at various times.

DISPOSITION: Did you ever think of a bird in connection with its having a disposition? Notice whether it is unsuspicious, wary, social, solitary, etc.

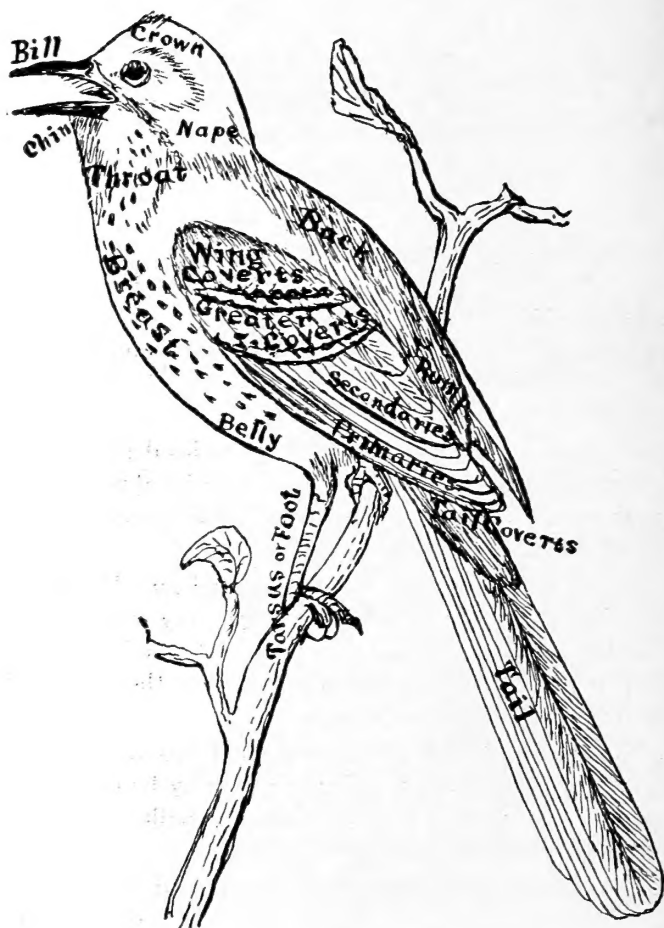
FLIGHT: Does the bird that flies over your head travel rapidly or slowly? Does it flap along or does it sail and soar? Maybe it undulates (flies up and then down in half-moon curves) as the Goldfinch does.

SONG: There are many times when you may hear a bird but not see it. Thus you should listen for songs very carefully. Notice whether the song is continuous, short, loud, low, pleasing, unattractive, and whether it comes from the ground, from a higher perch, or from the air.

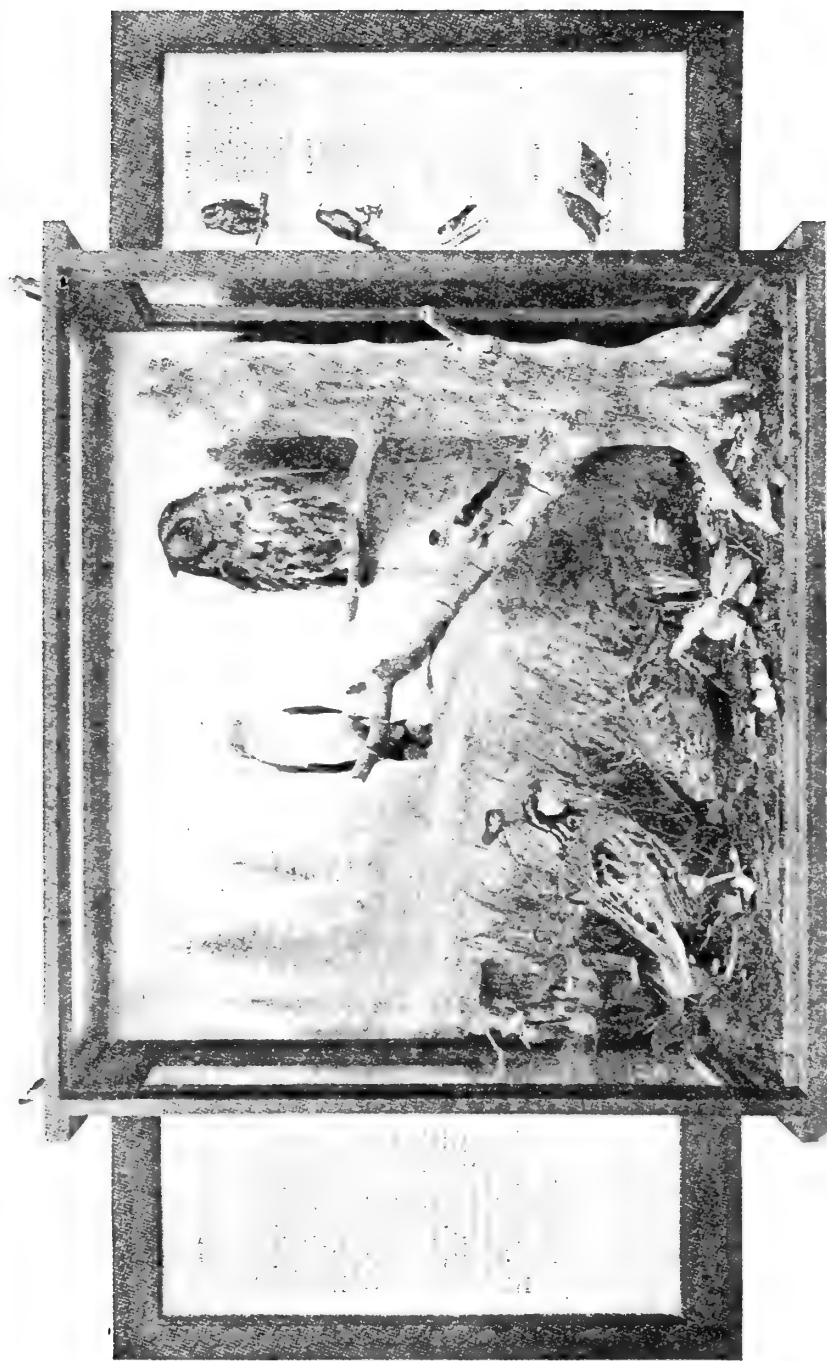
CALL NOTES: Nearly all birds have a **CALL NOTE** that is different from the regular song. These notes may be of various sorts such as scolding, warning, alarm, signalling, as well as a number of others.

SIZE: In the field, you cannot run up to a wild bird and measure it with a ruler, but what you can do is to compare it in size with some other bird that you do know. Compare the unknown bird with an English Sparrow which is about 6 inches long, a Robin about 10 and a Crow 19 inches long. Remember, 6, 10 and 19.

FORM: Note the shape of the bill, length of the tail, shape of wings.



Bird with parts labeled



"BIRDS THAT ARE OUR FRIENDS"

One of the new "Habitat Group" circulating nature-study collections. The label-holders are hinged to the back of the case and close over the ends, protecting the glass during transportation. The label at the left is general and gives reasons why birds are our friends. That on the right deals with the habits and use of the specific birds in the case, each bird being identified by a simple drawing instead of by title or number.

MARKINGS AND COLOR: See just where the markings are. Remember that if a bird were seen without feathers, it would look quite a bit like any other animal. The next time you have a chicken after the feathers have been removed, look at it closely. The wings look like arms, and as a matter of fact, they have three "fingers," which may be easily seen. The bird has a crown on its head; he has "cheeks," a breast, a throat, a belly, and a rump as well as other external or outside parts. Do not say that you saw a bird that was "black and white and brown all over." No one could tell you what sort of a bird that was. *See*—just what you are looking at. As with the **MARKINGS**, you should know something of the parts of a bird before you are able to tell just where the colors occur. How many colors are there on the under side of the Robin?

APPEARANCE: The bird may be alert, wide awake or pensive as though it had just lost a friend. Its tail may be drooped, its crest erected or its feathers ruffled.

HAUNTS: Where did you see the bird? Was it near the seashore, beside the river, in the woods, the fields, a place where the land was low and swampy or high and rocky, or was it down near the side of the lake?

SEASON: The time of year that the bird is seen is a very important thing to notice and to take into consideration. Look for the times when birds first arrive and when they leave. Did you see them in the winter, spring, summer, or fall? Are they permanent residents?

FOOD: When you walked through the pasture or through the park and saw a bird eating something, did you stop and try to discover what that food was? Was the bird eating berries, insects, seeds? How was this food secured?

MATING: Every bird has certain courtship habits. Note these antics.

NESTING: Observe the choice of nesting site, the materials used in the nests, such as mud, grass, leaves, and so on. Notice the construction, the number and the color of the eggs; and the incubation period, or the length of time the eggs take to

hatch; and above all things, *do not in any way disturb any bird's nest.*

THE YOUNG: Watch and learn what food the young ones are given by the parents; how they are cared for; the time they remain in the nest; their cries, actions, first flights, and so on.

HOW TO FIND BIRDS:

- (a)—*When*—The best times of day are early morning and late afternoon. Why is this true?
- (b)—*Where*—A watered meadow with trees here and there attract birds. Learn this from observation.
- (c)—*How*—Use common sense as to dress and general actions. Sit down and let the birds come to you.

Based on Dr. Frank M. Chapman's "A Bird's Biography," p. 73—BIRD LIFE, published by D. Appleton & Co., New York.

THE BLUEBIRD

In this locality some of the Bluebirds are with us all the year through. However, they are not so often seen in winter as in warmer summer months. The Starlings and the English Sparrows have driven them from many former nesting sites.

FOOD: The Bluebird eats many insects, including beetles, grasshoppers and different kinds of caterpillars. He also often feeds upon such fruits as cedar berries, wild cherries and those of other wild plants.

BILL: The bill of this bird is much like that of the Robin and the Thrushes. These birds are very closely related.

FEET: Being a typical perching bird, the Bluebird has very well developed feet. The hind toe is larger than any of the front ones and is of great value in grasping a twig or larger branch.

NEST: When the Bluebird has found his mate, the pair begin their search for a home. It may be in a hollow tree, fence post, or in a box built by some friendly hand. Within the nesting hole a bed of dried grass is made. Five or six pale blue eggs are laid and then the new family is well on its way.

SONG: The song of the Bluebird, while not very lengthy, is very soft and sweet. It has a musical tone and is one of the most beautiful of the early Spring bird voices. The notes are somewhat unsteady and have a tender, plaintive quality.

John Burroughs has said of the Bluebird:—

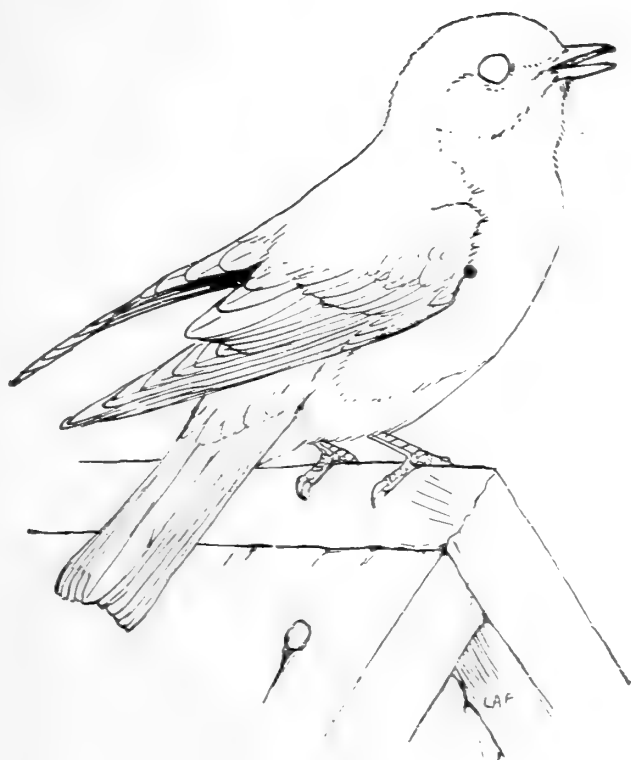
“And yonder Bluebird, with the earth tinge on his breast and the sky tinge on his back, did he come down out of heaven on that bright March morning when he told us so softly and plaintively that, if we pleased, Spring had come?”

William Cullen Bryant has written:—

“When beechen buds begin to swell,
And woods the Bluebird’s warble know,
The yellow violet’s modest bell
Peeps from last year’s leaves below.”

And Lowell:—

“Shifting his light load of song,
From post to post along the cheerless fence.”



The Bluebird

7 inches

THE PHOEBE

Toward the end of March, the peaceful, confiding Phoebe ventures northward. Sometimes ice and snow greet the little bird, but on he goes to take the weather as it comes. The return journey to the far south does not begin until the first frosty nights of September tell the story of approaching winter.

FOOD: At the time of the Phoebe's arrival, some of the first flying insects are trying their wings. As the Phoebe is a flycatcher, he may be seen, darting and wheeling about, in pursuit of his food. The snap of his beak may be heard as some small creature is overtaken and swallowed. Beetles, weevils, flies, grasshoppers and other insects help to feed this bird.

BILL: The bill of the Phoebe is admirably adapted to its feeding habits. This bill is quite broad and strong. Upon each side are small "bristles" which help the bird to feed while flying. How do these "bristles" help?

WINGS and TAIL: The Phoebe is an expert in the air. His wings and tail are comparatively long and powerful. Compare them with those of the Wren. Which one of the two is the best flier? Why?

SONG: While resting and while watching for insects, the Phoebe often perches upon the end of a branch or fence post and sings—"*pewit-phoebe-phoebe-phoebe.*" At the same time, he moves his tail with a sideway sweep, in a jerky little way. He is not much of a singer, but when the sound, "*phoebe-phoebe*" comes to us in March or early April, we know that Spring will soon be here.

NEST: The nest of the Phoebe is well built of mud, moss and other materials. It is sometimes lined with wool and feathers. The structure is placed on some flat surface, such as upon a rafter beneath a bridge or in a barn. Occasionally the nest is built under some sheltering bank or cliff. The eggs are usually white.

Of the Phoebe, Lowell has written:

"Phoebe is all it has to say,
In plaintive cadence o'er and o'er
Like children that have lost their way
And know their names, but nothing more."



The Phoebe, a Flycatcher

7 inches

THE BARN SWALLOW

The Barn Swallows arrive in the North toward the end of April and leave early in September. They are sociable birds and travel in huge flocks.

FOOD: Insects, caught upon the wing, form the diet of these Swallows. They dart here and there, over field and water, catching their prey in swift, graceful flight.

FEET: Often, in the season of migration, thousands of Swallows perch upon telephone wires, sometimes in such large numbers that the wires are broken. Their small feet are well suited for this, but not for walking upon the ground.

TAIL: The tail of the Barn Swallow is deeply forked. When perched, these long protruding outer tail feathers serve to distinguish the Barn Swallow from all other native Swallows.

SONG: The gentle twitter of the Barn Swallow is a familiar sound about many a farm where an old barn or other outbuilding may provide a nesting site. It is a musical sound that changes to a "*kit-tic—kit-tic*" when the bird becomes excited.

NEST: The cup-shaped nest of the Barn Swallow is made of mud and is lined with grass and feathers. It is stuck to the side of a rafter or beam or against the inside of the weather-boarding of an old barn where a broken window pane or other hole admits the bird from the out-of-doors. The eggs are white, speckled with brown and lavender.



THE TREE SWALLOW

Tree Swallows nest both in hollow trees and in nesting boxes that man has erected for their use. The upper parts of this bird are of a blue-green color while the under parts are of a pure white. When going to the south they collect in huge flocks and, after having flown high into the air, they begin their journey in the daytime. At Long Beach, Long Island, thousands of them have been observed feeding upon the bayberry bushes just before they started south.



1. Purple Martin

Shining blue-black; wings and tail duller

2. Eave or Cliff Swallow

Back and crown steel blue, forehead cream white, throat and sides of the head chestnut, breast brownish gray, under part whitish

3. Sandbank Swallow

Upper parts and band on breast brownish gray, throat and under parts white

4. Barn Swallow

Under parts dark blue, forehead, throat and breast reddish brown

5. Tree Swallow

Upper parts dark blue or green, throat and under parts white

THE HOUSE WREN

Some day, late in April, the House Wren will appear to add to the growing bird population. Not until the middle of August or the end of September will he depart. He is the most common of our Wrens.

FOOD: Ninety-eight percent of the food of this small bird is made up of insects.

ACTIONS: These little birds are very restless. They seem never to be still. From dawn to dark they are bobbing, hopping, and bowing about with tireless energy. The stiff tail, constantly jerked, is usually in an upright perky position, and is a true mark of the Wren's personality.

SONG: The House Wren is more noted for the quantity of his song than for the quality. Although parts of his singing are soft and musical, there are other times when scolding, grating notes mar the performance. Constantly singing, the Wren goes about his work. Even when flying or perching with a worm in his beak, he will sing away as though the thoughts of mere food were far indeed from his mind. The true song is a spontaneous and rollicking outburst, and is sung with real abandon that fairly makes the small feathered body tremble with the force of its effort.

NEST: The nest of the House Wren is made within some cavity, either natural or man-made. If no hollow tree is about, an eave spout will do, provided that an English Sparrow has not found it first. Wrens have even been known to build their nests in old shoes! The material used consists of grass and short twigs, feathers and like material. The eggs, sometimes as many as eight in number, are thickly speckled with pinkish brown.

FLIGHT: The flight of the Wren is very erratic. It darts here and there with much speed. Although not a very strong flier, the bird travels in many places that larger birds could never manage.



The House Wren

4¾ inches

THE CHIMNEY SWIFT

The Chimney Swift, which is in no way related to the Swallows, is seen in the North toward the end of April or early in May. From the last weeks of August until late in September, southward bound flocks may be seen, and then the bird has left us until Spring comes again.

FOOD: The Swifts feed entirely while flying. They eat small flying insects of many kinds, catching them chiefly in the early morning and late afternoon.

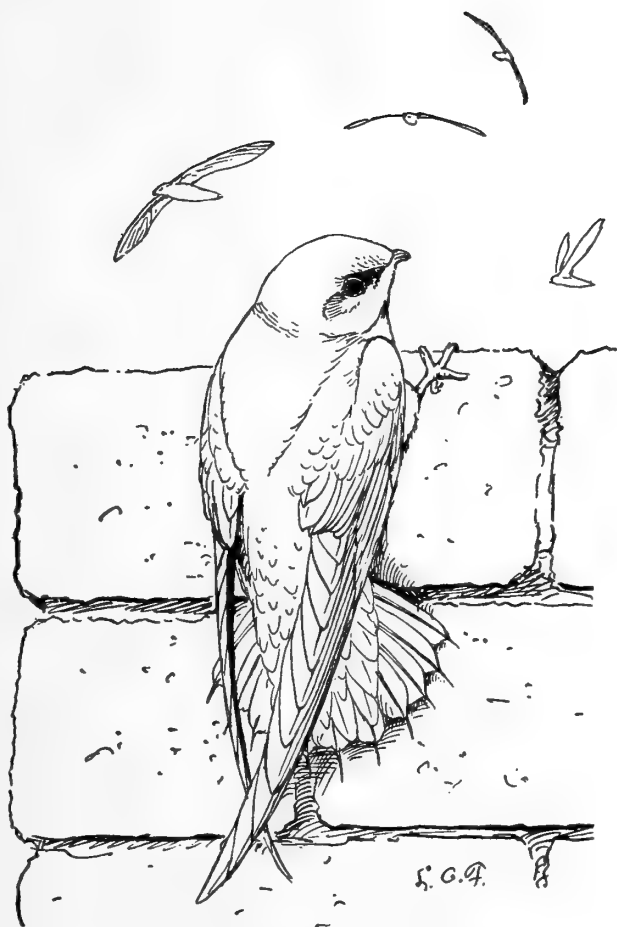
FEET: Seldom does the Swift alight upon any flat-topped object. Its characteristic perching place is upon some rough-surfaced tree or chimney where the small, weak feet cling to the wall and hold the bird in an upright position.

TAIL: The tail of the Chimney Swift is used as a prop to aid the bird in holding fast to vertical surfaces. The feathers of this fan-shaped prop are spine-tipped.

WINGS AND BODY: The body of the Swift is "cigar shaped." The wings are slender though powerful and have long outer feathers that help him to fly for hours at a time.

SONG: The Chimney Swift has no true song. His singing efforts result in a "*chip-chip-chip*" repeated over and over again, with a twitter-like rhythm, sometimes sounding "*chippy-chippy-chippy-chip*."

NEST: The nest of this bird is an unusual structure made of twigs that are glued together with its glutinous saliva. It forms a shallow, saucer-shaped platform in which the small white eggs are laid. Before man-made chimneys offered nesting sites, the Swifts built in hollow trees.



Chimney Swift—5½ inches

THE CHICKADEE

The friendly, sometimes inquisitive Chickadees, are with us all through the year. Ever active, they fly here and there searching for food, and giving their cheerful calls.

BILL: The tweezer-like bill of this little bird is very well adapted to the catching and eating of small insects and their eggs.

HABITS: The Chickadees are never strangers to one who walks within sight or hearing of them. They fly very near and have even been known to perch upon the hand of different bird watchers who have sufficiently gained their confidence. The gray and black colors of these small balls of feathers match the tree trunks and branches upon which the Chickadees climb and hang in search of food.

SONG: The Chickadee tells his own name when he sings. Ella G. Ives has said:

"I know a little minister who has a big degree;
Just like a long-tailed kite, he flies his D. D. D. D."

"Chickadee-dee-dee!" is the music that comes from this small gymnast of the branches. Sometimes a "Phoebe" call-note is also given. It is quite simple to imitate this note by whistling. If you do it correctly the Chickadee may answer.

NEST: An old, hollow stump or fence post is often chosen by the Chickadee for a home. The nest within is built of moss, plant fibers, grasses, and feathers. From five to nine eggs are laid. They are of a white color spotted with a ruddy brown.

Ralph Waldo Emerson admired the Chickadee who braved the winter's cold, and seemed so happy in the very coldest of weather. He wrote this about the little bird:

"This scrap of valor just for play
Fronts the north wind in waistcoat gray,
As if to shame my weak behavior."



The Chick-a-dee

$5\frac{1}{4}$ inches

THE WHITE-BREASTED NUTHATCH

The Nuthatch is one of the tree trunk birds that, in the winter-time, is a close friend of the Chickadees and the Downy Woodpeckers. He is with us all the year around. Some people have called him the "Upside down bird" due to the fact that he is able to run up and down the trunks of trees in almost every conceivable position.

FOOD: The food of the Nuthatch consists of the small insects that live under and upon the bark of trees. The small, sharp pointed beak is well adapted to pry off sections of loose bark that may house some eggs, larvae or pupae of insects that are hidden for the cold months.

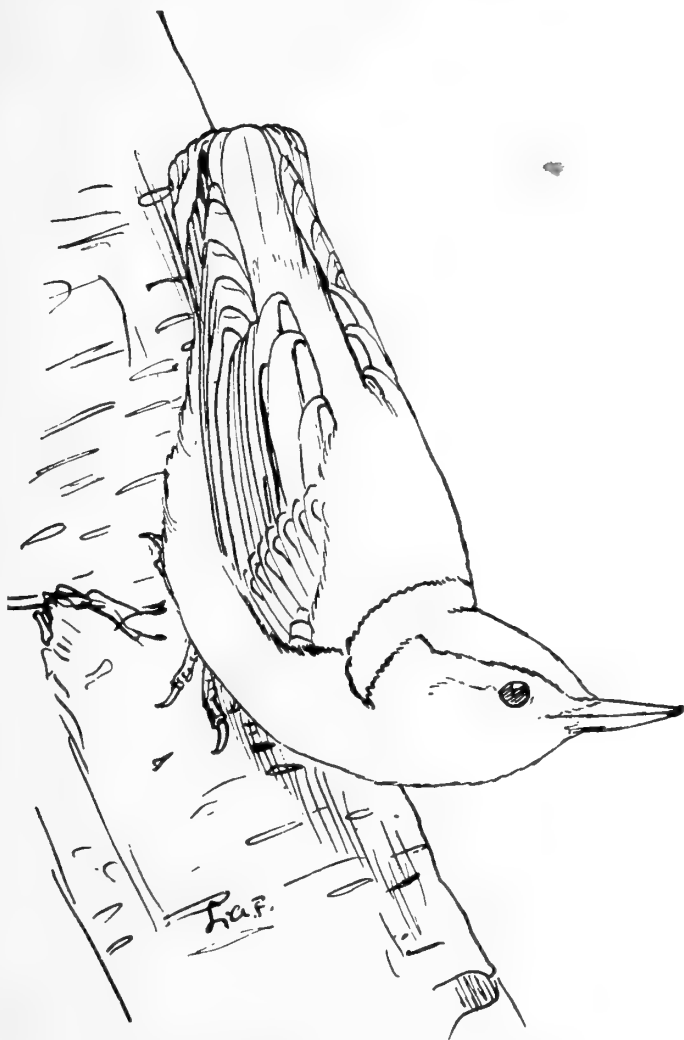
HABITS: Edith M. Thomas has written a little poem about the Nuthatch. It is a good description of the acrobatic powers of these little gray birds of the woods.

"Shrewd little haunter of woods all gray,
Whom I met on my walk of a winter day—
You're busy inspecting each cranny and hole
In the ragged bark of a hickory bole;
You intent on your task, and I on the law
Of your wonderful head and gymnastic claw!"

"The Woodpecker may well despair of this feat—
Only the fly with you can compete!
So much is clear; but I fain would know
How you can so reckless and fearless go,
Head upward, head downward, all one to you,
Zenith and nadir, the same in your view."

NEST: The nest of the Nuthatch is located in a hole in a tree or stump. It is lined with feathers, leaves and other similar materials. The white eggs are thickly speckled with a rufous and lavender color. From five to eight eggs are laid.

SONG: Some one has described the song of this bird as being like the laugh of a very old man. As the Nuthatch pauses from his work to inspect you, he may suddenly decide that you are no longer worthy of his attention. With a harsh little "yank-yank," he will then continue his insect hunting and leave you to marvel at his actions.



The White-breasted Nuthatch

6 inches

THE SONG SPARROW

The Song Sparrow is a member of a very large family. His near relations are found in many regions of the earth. In winter, fall and spring, he is with us to represent his kind, and a fine representative he is, with his good spirits and ever-ready song.

FIELD MARKS: The red-brown line behind the Song Sparrow's eye, combined with the tiny splash of black and brown which streaks his breast, are two marks by which the bird may be identified. The larger blotch of color upon the breast is in the center of the "splash."

SONG: This Sparrow is a musician of fine ability. The call note is but a metallic "*chip*." The homing song is worthy of the attention of any one who likes to hear good music in the out-of-doors. There is no one song but rather a combination of songs which are varied from time to time. The beginning of the song is usually of three sustained introductory notes. The following notes rise in rapid succession and are of a pure musical quality. The strain is a cheerful, simple melody.

NEST: The nest of the Song Sparrow is built either upon the ground or in bushes. It is made of coarse grasses, rootlets, deadleaves, strips of bark and similar materials. The eggs, four or five in number, are of a bluish white with brownish markings which are often so numerous that they conceal the underlying color.

FOOD: The diet of the Song Sparrow consists largely of the seeds of harmful weeds. It also feeds upon insects such as ants, beetles, and weevils. The beak of this Sparrow is comparatively large and strong. It is well adapted to open large seed pods in order to reach and eat the kernel within.

Henry Van Dyke has written a little poem about the Song Sparrow. The first stanza of the poem, from "Builders and Other Poems" is given here:

There is a bird I know so well,
It seems as if he must have sung
Beside my crib when I was young;
Before I knew the way to spell
The name of even the smallest bird,
His gentle, joyful song I heard.
Now see if you can tell, my dear,
What bird it is that every year,
Sings, "Sweet-sweet-sweet, very merry cheer."



The Song Sparrow

6¼ inches

SCREECH OWL

This little permanent resident is quite common in the outlying sections of the cities. He seems to care for the society of man. Very often, he is to be found near human dwellings rather than far out in the woods. Just why we should call this bird the "Screech Owl" is somewhat of a mystery. The Owl has a tremulous, quavering voice that in no way suggests a "screech." Perhaps it is that the name has come to us from Europe. At any event, it is not appropriate to our small Owl.

FOOD: Sometimes in walks out-of-doors we may come upon small, gray colored pellets made of hair and tiny bones. Very often, these have been ejected by the Screech Owl, who is able to digest the flesh of his prey but not the skeleton and the outer covering. This beneficial night flier feeds upon mice and other creatures. His sharp, hooked beak is adapted to tearing food and his rather long and pointed little talons are of great use in grasping it.

COLOR: There are two color phases of the Screech Owl. One is a mixture of mottled reddish brown, and the other a brownish gray shade tinged with black. These two phases have nothing to do either with sex, age, or season.

"EARS:" The two small tufts, one on either side of the head, are not ears at all. They are merely feathers. They may well serve to distinguish this bird from the Acadian or Saw-whet Owl which is not at all common.

NEST: The nest of the Screech Owl is often placed in a hole in a hollow tree. The pure white eggs, some five or six in number, are laid in April.

When night time comes, the Whip-poor-will sings,
The Owl sails off on noiseless wings
To search for mice and other things;
And I go home to bed.



Screech Owl

THE KINGLETS

There are two varieties of Kinglets in this section of the country, the Golden-crowned and the Ruby-crowned. Both members of the family are beautiful little birds that visit us in autumn and depart in the spring. They are not with us during the warmer months. In the coldest time of the year these little, restless wanderers among the trees may be seen and heard. Except for the Humming-bird and the Winter Wren, the Kinglets are the smallest birds that we have.

THE RUBY-CROWNED KINGLET

The male bird may be identified by the partly concealed tiny crest of red which the bird often raises.

THE GOLDEN-CROWNED KINGLET

A crest of gold marks this cousin of the Ruby-crowned. Often no color is visible upon the head except the uniform olive or greenish tinge. However, when the bird is excited, the crest is raised and it is then that the color of the crown may be very well seen.

HABITS: The Kinglets are friendly birds that often come very near. They seem to be much more tame than the warblers.

FOOD: A constant search for tiny insects occupies the time of the Kinglets.

SONG: The Ruby-crown is the superior singer of the two. His song consists of a loud, clear warble, interrupted here and there with a wren-like chatter. The Golden-crown's song may be expressed as "tzze, tzze, tzze, tzze, ti, ti, tir, t-t-t-." The call note is an extremely high-pitched "ti-ti."

NEST: The roundish nests of the Kinglets are made of moss, thin strips of inner bark, feathers and other like materials. These nests are made in evergreen trees and are sometimes placed as high as sixty feet above the ground.



Ruby-crowned Kinglet— $4\frac{1}{4}$ inches

ROBIN

Our native Robin is not closely related to the bird that the English call "Robin Redbreast." He is rather a relative of the Bluebird and the Thrush. Before the young of the Robin leave the nest, their breasts are speckled as are the breasts of the Thrushes. After the first moult, this marking disappears. Some of the Robins are with us all through the year. However, only the hardiest of them stay during the Winter. The majority travel to the warmer climates. Those who come to us from the South arrive about the first of March and depart toward the end of October.

SONG: "In the sunshine and the rain

I hear the robin in the lane

Singing, 'Cheerily,

Cheer up, cheer up;

Cheerily, Cheerily, Cheerily, Cheer up'."

A writer in "A Masque of Poets" has described the cheer in the Robin's song very well. Robin music has real melody and expression. Indeed, there are very few of our birds that have what might be called as great a vocabulary, or as many expressive notes, as has this familiar bird.

NEST: The nest of the Robin is built of grasses, rootlets and leaves.

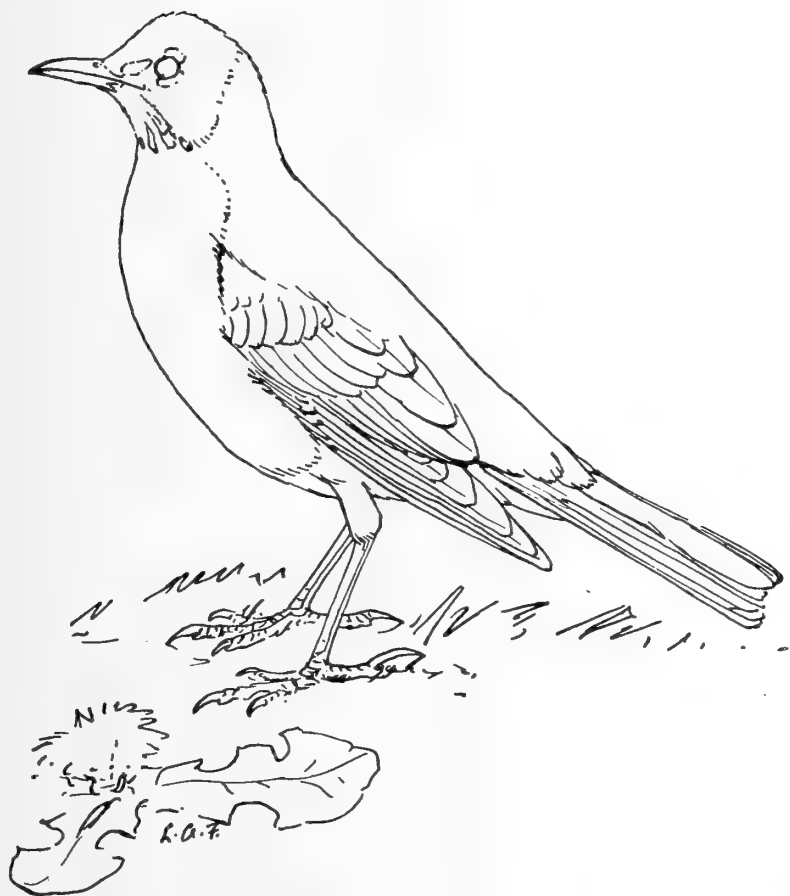
The interior is well lined or plastered with a layer of mud.

Another layer of fine grass forms the bed upon which the greenish blue eggs are laid. These eggs are from three to five in number. Robins often raise two families each year. The young of the first brood leave the nest toward the first of July.

FOOD: In June and July, Robins feed to some extent upon berries and similar fruits. However, what little harm they may do in this way is vastly offset by the good that is done during the rest of the year. The Robins are gleaners of insects. They eat great quantities of beetles and their grubs, grasshoppers, crickets, ants and other plant pests. One of the most comical sights of bird feeding is to see a large, round, healthy Robin struggle to pull a resisting, equally healthy, earthworm from its hole in the ground. Often, the worm breaks in two and the Robin, suddenly and most unexpectedly, tumbles over backward. The Robin seems to "Listen" for the worm as he walks and hops over the lawn in the early morning.



SONG: The song of the Robin in early Spring tells us that warm weather is not far off. We look for his brick red breast and watch him as he feeds about our lawns and gardens.



The Robin

10 inches

THE RED-WINGED BLACKBIRD

Early in March, the male Redwing arrives. It is not until two or three weeks later that the female comes from the south to join his company and to sail about over the cat-tails of the marsh. When August has gone by, the adult Blackbirds are seldom seen. It is in July that the young and old birds congregate in large flocks to prepare themselves for the journey southward. Red-winged Blackbirds from farther north may be seen as late as October.

MARKINGS: The male Red-winged Blackbird is of a faultless glossy black with shoulder patches, or epaulets, of a bright scarlet, edged with gold. His mate is of a more sober appearance—streaked with modest brown.

SONG: Henry D. Thoreau described the Red-winged Blackbird's song as—"Chonk-a-ree." These free, truly bubbling notes are given again and again as the birds go about their everyday tasks in the Spring. The arrival of the females, however, is perhaps the signal for the greatest singing effort on the part of the males. It is at this time, especially, that the marshland is fairly alive with the rich reed-like song that repeats—"Conk-a-ree"—"Conk-a-ree"—"Conk-a-ree"!

NEST: The nest of this bird is woven of grasses, weed-stalks and rootlets. Sometimes it is built in a friendly, compact mass of cat-tail, and other nests may be seen in low bushes or tussocks. These Redwings do not welcome visitors to their nesting sites. They raise very strenuous objections, and, in their attempt to drive away the intruder, bird, beast or man, they will fly very near, scolding in harsh tones the meanwhile.

EGGS: The eggs of the Red-winged Blackbirds are truly unusual in their markings. They are of a pale blue ground, or base color, and are often scrawled over with a dark purple or black. They appear to have been stepped upon by a bird that has first dipped its toes in a bottle of ink. These eggs are from three to five in number.



The Red-winged Blackbird

9½ inches

BALTIMORE ORIOLE

“How comes it, Oriole, thou hast come to fly
In tropic splendor through our northern sky?”

Edgar Fawcett asks this question in his poem. Who is there that may answer him? The Baltimore Oriole comes to us in early May and stays until about the first of September. This bird, sometimes called the Golden Robin, is a namesake of George Calvert, or Lord Baltimore, who was the first proprietor of Maryland. Indeed, he does seem “golden” as he flashes about among green leaves. However, he is a relation of the blackbirds, rather than of the robins.

COLORS: The brilliant orange and black feathers of the Oriole are the marks by which the bird may be identified. The head, shoulders and neck, and the upper section of the back are of a gleaming black. The breast is of a bright orange, sometimes almost golden in its color.

SONG: A loud, sometimes bold, whistle from the top of a sweeping elm tree often announces the presence of the Baltimore Oriole. He is a fine songster of considerable ability. His song is characterized by a richness that gives a truly musical quality to his efforts.

The same poet asks further:

“At some glad moment was it Nature’s choice and charm
To dower a scrap of sunset with a voice?”

NEST: The beautiful hanging nest of the Baltimore Oriole is often suspended from the end of the branch of some shade tree, where it sways with every passing breeze. It is composed of hair, strings, grasses, bark lining and other similar materials all closely interwoven with the greatest of skill. The eggs, four to six in number, are of a white color marked with wavy blackish lines and spots. This bird has been known to make very good use of yarn, string, and even strips of cloth, placed where they might easily be found and woven into the nest. Some nests built almost entirely of string have been found.



The Baltimore Oriole

7½ inches

CHIPPING SPARROW

The sociable personality of the Chipping Sparrow enables the bird student to make his close acquaintance. He is a little bird of modest habits, who shows his trust in the human race by living very near to the homes of man. In early April "Chippy" arrives. He leaves for the South about the first of November.

SONG: "*Chippy—Chippy—Chippy*" is all this small Sparrow has to say. Certainly, this is not an especially attractive song, and yet it is very much in keeping with the unassuming disposition of the bird. It could scarcely be called a song. It is an extremely high pitched note with very little musical quality. Nevertheless, somewhat monotonous though the songs may be, they seem to have a peculiarly friendly air, that, at times, is very welcome.

FOOD: Injurious insects are eaten in large quantities by the Chipping Sparrows. Beetles, grasshoppers and other similar insects are the prey of this bird. Many different types of seeds constitute the rest of the diet. "Chippy" will readily accept human hospitality whenever crumbs are scattered, provided, of course, that the English Sparrow does not arrive at the feeding station first.

NEST: The nest of the Chipping Sparrow is built in bushes, shrubs, trees, or in the old vines that grow about country houses. The nest is lined with long hairs. One often wonders where the bird finds so many of them. Grass and fine twigs are used for the main construction of the home.

REMARKS: The little chestnut cap of the Chipping Sparrow is perhaps his most noticeable marking. By this, and by his small size, he may be readily identified. He is sometimes called the "Least" Sparrow. Like some other members of the Sparrow family, he sometimes awakes in the middle of the night and bursts into song.



The Chipping Sparrow or "Chippy"

5¼ inches

THE MEADOWLARK

This bird of the fields may be seen during every month of the year. After walking among the grasses, it may suddenly fly up and may be identified by the conspicuous white outer tail feathers which flash in the sunlight.

FIELD MARKS: The black crescent upon the yellow breast of the Meadowlark is a fine field mark. In the early morning, when a rising sun shines upon the open meadows, this bright yellow patch seems to be, in itself, a reflected spot of golden light. In winter, a brownish tone, more like the dried swamp grasses, covers the plumage.

FOOD: Insects form the major portion of food for this guardian of the hay fields. Sow-bugs, weevils, grasshoppers, ticks, plant-lice and other enemies of the farmer all fall prey to the pointed, searching beak.

NEST: The beautiful little nest, sometimes arched over, is built of dry grass. It lies hidden upon the ground, often defying the keenest of eyes of hawk and man alike. The eggs are white, speckled with a reddish brown color. They may number from four to six.

SONG: The music of this ground bird is somewhat sad. A slurred whistle, rising from the grass in spring and early summer, tells of the hiding place of the Meadowlark, singing in a plaintive minor key. Sometimes this song comes from the air. Its clear notes may be heard all through the year.

Spring o' the Year

The Meadowlark's song is "Spring o' the year,"
As he flies o'er fields of hay;
He sings of his toil and not of the cheer
That lies in a land far away.

REMARKS: The protective coloration of the Meadowlark is of great help to the bird. The soft brown and ground colors aid it in escaping such enemies as Hawks and other preying creatures. To a soaring bird of prey, the Meadowlark must seem to be only a section of the ground upon which it walks.



The Meadowlark

10¾ inches

THE BLUE JAY

The Blue Jay is closely related to the Crow. He shows this relationship in a number of ways. He is very intelligent, has a keen sense of humor and is an observer of birds and men. All the year long he makes himself known to us by his striking plumage, loud voice, and active body. During the nesting season, however, he is comparatively quiet and we see little of him.

FOOD: During eight or nine months of the year the Blue Jay earns an honest living. He eats many harmful insects, frogs, snails, and even small fish and mice. In the breeding season, however, the Jay sometimes turns robber and has been known to steal the young of other birds. Nevertheless the Jay is a likable creature, and probably before human beings came to disturb him he was not quite so much of a nuisance to other birds as he is now.

SONG: The clearly whistled note of this bird proclaims the name *Jay!—Jay!—Jay!* in loud, harsh, ringing notes. Sometimes the song is quite pleasing with a bell-like quality. Some think that when the Jay calls he says *Thief! Thief! Thief!*

NEST: The Blue Jay often constructs his nest in a convenient crotch of a tree. It is built of twigs quite strongly interwoven. The lining is of leaflets. The inside of the nest is not by any means soft. The pale olive brown or green egg sprinkled with brownish are from four to six in number.

REMARKS: It is in the winter time that we really know the Jay in motion. When the snow is on the ground and the woods and fields are quiet it seems a fine thing to see dashing through the branches, calling again and again, a bright bluish bird who gives an entirely different atmosphere to the outdoors. Being something of a mimic, he sometimes takes delight in imitating the songs of such birds as the Red-shouldered Hawk and other songs that have a similar ring. He has been called a reprobate, but, despite his bad habits, who is there that does not appreciate his vivacity and ever-active personality?



The Bluejay

11½ inches

DOWNY WOODPECKER

This little member of the Woodpecker family is a permanent resident with us. All the year through he is to be seen busily engaged in his life work, which is a constant search for food. The Downy Woodpecker may be distinguished from the Hairy Woodpecker mainly by its smaller size and by its outer tail feathers which are barred with black.

FOOD: The food of nearly all Woodpeckers consists of insect material that is found on or within the bark of trees. Thus when the Downy Woodpecker is searching for food, he may be seen upon the tree trunks or even hanging beneath branches pecking away, excavating and digging. To name the injurious insects that form this Woodpecker's diet would take a long list. "Every stroke with which he knocks at the door of an insect's retreat sounds the crack of doom. He pierces the bark with his beak, then with his barbed tongue drags forth an insect, and moves on to tap a last summons on the door of the next in line."

NEST: The Downy Woodpecker makes his own home. He uses his beak for a chisel and for a pick, and digs away at some hollow tree stump making a neat little round hole that leads to a cavity wherein the white eggs are laid. By way of a bed for these eggs the Woodpecker uses a few soft chips. These same holes are often used the next season by some little Chickadee who is only too glad to take advantage of his opportunity.

SONG: In addition to tapping or drumming upon a hollow stump, thus making a noise like a tiny drummer, the Downy Woodpecker also has a sort of song. The notes are rather business-like and come through the woods industriously,—in rapid succession—*peek-peek-peek!* Sometimes, especially when interrupted, the notes may sound like *chink-chink-chink!*

REMARKS: In the winter time the Downy Woodpecker leads a rather solitary life flying about in the woods, searching here and there, calling now and then, and patiently waiting for the return of Spring. In the Spring, however, when the mating season comes again, the Downy takes a new interest in life, becomes more active and generally shows himself to be very well aware of the fact that soon he must expect to work upon his new home. It is at this time that the call note *peek-peek-peek!* comes more sharply than ever.



Downy Woodpecker—6 inches

THE STARLING

Like the English Sparrow, the Common Starling has become a Naturalized American Citizen. He was introduced from Europe in 1890, when sixty of his kind were released in Central Park, New York City. He is a very permanent resident wherever he has spread, and, because of the fact that he often ousts local or native birds, he is somewhat objectionable.

SONG: The song of the Starling has many attractive notes. The whistles are especially appreciated by city dwellers who seldom hear the songs of more gifted birds. An indescribable jumble of notes characterizes the remainder of the Starling's musical efforts. William H. Hudson has written a very good description of this bird's song—"His merit lies less in the quality of the sounds he utters than in their endless variety. In a leisurely way he will sometimes ramble on for an hour, whistling and warbling very agreeably, mingling his finer notes with chatterings, squealings and sounds as of snapping the fingers."

NEST: The Starling will build in crevices of buildings, in hollow trees or in bird houses erected for the use of other birds. The nesting material consists of grasses, straw, twigs and other available material. The eggs, four to six in number, are of a pale bluish color.

FOOD: The Starling eats a great number of insects. Cultivated cherries, unfortunately, also, are very well liked by the bird who feeds upon them quite often during the breeding season.

REMARKS: The plumage of the male Starling is quite beautiful. It is of an iridescent, metallic color in the spring and summer. In the winter, a brownish gray obscures the more brilliant colors. The bill of the bird is yellow in summer, but dark horn-color in winter.



Starling—8½ inches

JUNCO

The slate-colored Junco comes down from the North to spend the winter in a more moderate climate. He may be first seen toward the last of September. The departure for the North is made about the first of May. They are certainly welcome visitors, coming as they do when most of our smaller birds have gone on further South. In small flocks, these plump little birds hop and fly, here and there, over the snow, searching for weed seeds and other food.

SONG: The notes that are more frequently heard are sharp little "*tsips*" given rather as a call note than as a song. The true music or regular song of the Junco is a decidedly musical trill. Sometimes, when disturbed, the birds will utter a short "*smack!*" and fly to some other place where they may be uninterrupted in their hunting.

MARKINGS: The Junco is a very trim little bird, with a somewhat stylish appearance. He is quite plump and has a covering of neat slate color above and upon the throat in a "bib" formation. The belly is white. Two very conspicuous white outer tail feathers are the most striking identification marks.

BILL: This bird is a member of the Sparrow family. He has a thick, pointed little bill that is of great service in crushing seeds. When the sun shines directly through this bill, a flesh-colored pink is shown.

NEST: The Junco nests from northern New York and New England, northward. The nest is made of fine rootlets, grasses, and moss, interwoven and built upon the ground or just above in small bushes, and lined with hairs.

REMARKS: The sociability of the Junco is mainly responsible for his traveling in small flocks during the winter time. Crumbs and similar foods are greatly welcomed by this bird, who will often come quite near to human homes if sufficiently invited. The flash of white and gray is a welcome sight as a small band of these birds comes flying into the garden when the clouds above are heavy and gray with oncoming snow. It is at this time that we most appreciate their company.



The Junco
 $6\frac{3}{4}$ inches

THE ENGLISH SPARROW

The English Sparrow is most often referred to as a pest. It is a permanent resident in more senses than one. It was in 1851 and 1852 at Brooklyn, New York, that the small bird was first introduced. During the first 20 years or so it was mostly confined to the larger cities in the east. However, due to the bird's rapid increase it has spread throughout every State in the Union and has proved itself to be truly a great nuisance. Native birds have been driven from their homes and have been robbed of much of their food and many of their nesting sites.

SONG: The English Sparrow has no true song, but rather is content to call *Chirp—Chirp—Chirp—Chirp!* over and over again. Sometimes, in the larger cities such as New York, far from the parks where no other birds would probably be, the hardy little Sparrow is welcomed by the children to whom, without him, bird life would be entirely a closed book. Thus it is that the *chirp-chirp-chirp!* is not unwelcome everywhere.

NEST: Dr. Frank M. Chapman has said that the English Sparrow builds its nest of any available material, in any available place. Behind window shutters, in upturned eave spouts and gutters, beneath roofs, in holes in trees and in almost every conceivable place, this bird makes its home. The eggs, four to seven in number, vary greatly in coloration. Sometimes they are plain white, sometimes almost completely colored with olive brown. They are often marked with olive.

REMARKS: Even though this little bird is truly a pest it seems a shame to criticize him in too harsh terms. After all, it is not his fault that he was brought to a country whose climate and general living conditions proved to be exactly what he wanted. He has thrived because his adopted habitat has proved to be ideal. Let us not confuse this bird in any way with our truly native sparrows whose habits are so entirely different from this little English Colonist. The names of some of our North American birds of the same family are the field sparrow, the song sparrow, the vesper sparrow and many others whose lives, unfortunately, are not nearly so well known.



The English Sparrow

SCARLET TANAGER

The Tanagers do not winter north of the Mexican border. In the summer there are four species that occur in the United States, only two of which inhabit this section of the country. The Scarlet Tanager is one of the most common of these. He arrives early in May and departs early in October. These beautiful birds are not often seen unless we look up into the trees. The male bird, with his truly startling colors, is a sight to remember. The wings and tail are a jet black and the rest of the body is a remarkable scarlet. The female is more modestly marked with olive.

SONG: The song of the Scarlet Tanager resembles that of a Robin, but is much more throaty or buzzy,—causing one to think of a Robin singing with a cold in his syrinx. John Burroughs has referred to it as a “proud gorgeous strain.” The tones have a truly “proud” quality, and well express the feelings of one who would like to lie idle in the woods to fully enjoy the content and peace of a warm spring day. They suggest the quiet of a *tired* bumblebee droning his way homeward at the end of a hard day’s work. The call-note has been represented as “*Chip-churr—chip-churr.*”

NEST: The nest of this bird is made of stems, rootlets, and strips of bark. It is sometimes quite loosely constructed and is placed upon the outspreading limb of a tree sometimes as high as forty feet. The eggs, three to five in number, are of a greenish blue blotched with a chestnut color.

FOOD: The Scarlet Tanager destroys numerous harmful insects and is for this reason a very beneficial bird. Click-beetles, crane-flies, weevils and numerous caterpillars form a large part of his diet. The Tanager also eats some vegetable food such as small fruits, berries and the seeds of plants, most of which are wild.

REMARKS: The male Summer Tanager, which is another species, is of dull red above and a vermilion beneath. The female of this relation of the Scarlet Tanager is of a yellowish green above with a dull yellow upon the underside.

These Tanagers are truly tropical in their appearance. They are animated touches of color that seem somehow to be foreign to our Northern woods.



♂ ad.

The Scarlet Tanager

7½ inches

RED-EYED VIREO

Except for the Catbird, the most talkative bird that we know is the Red-eyed Vireo. He is first to be seen in late April. When October has come, the Red-eye travels Southward. All through the warm days of spring and summer, this persistent little bird sings and sings. Mr. Wilson Flagg has called him "The Preacher Bird." This title is indeed well earned for he seems to say, over and over—"You see me—I see you—do you hear me? Do you believe me?"

NEST: The pendant nest of the Red-eyed Vireo hangs from a forked branch. It is made of small bits of dead wood, plant down, paper and strips of thin bark all very neatly interwoven to form a tiny bird basket. The eggs, three to four in number, are of a white color with a few specks of brown or umber upon the larger end. Frequently the Cowbird leaves her egg in this little bird's nest. This poem by Faith C. Lee, in *Bird-Lore*, gives one person's opinion of the Cowbird.

Red-Eyed Vireo

"When overhead you hear a bird
Who talks, or rather chatters,
Of all the latest woodland news,
And other trivial matters,
Who is so kind, so very kind,
She never can say no.
And so the nasty Cowbird
Drops an egg among her row
Of neat white eggs. Behold her then,
The Red-eyed Vireo!"

MARKINGS: The trim little crown of the Red-eyed Vireo is of gray color, bordered upon either side by a neat little band of black. The eye of the bird is brick-red with a white line directly above.

FOOD: Although this bird is not a member of the family of Warblers, his habits are somewhat similar. Insect food is found in the trees, shrubs, and bushes.

Mabel Osgood Wright has referred to the Red-eyed Vireo as a bird of the mid-day. In her children's poem of nine stanzas, entitled "The Birds and the Hours," she says:



The Red-eyed Vireo

6 inches

Noon

"Who is the Bird of the middle day?
The green-winged, red-eyed Vireo gay,
Who talks and preaches, yet keeps an eye
On every stranger who passes by."

The Red-eye has been known to become so tame that persons have stroked a bird upon the back as she sat upon the nest.

THE GOLDFINCH

One of the merriest of all the many birds is the Goldfinch, or "Wild Canary," as he is sometimes called. When winter, with its biting cold and thick snow comes, we still find this cheerful little bird, visiting with its many friends, perhaps perched on some barren branch, twittering its gay little song to any who care to listen. It is during these months that we find he has changed his bright yellow coat for one of olive green. However, he still wears his little black cap as his head covering.

SONG: Not only does the Goldfinch resemble the Canary in color, but his singing is quite canary-like, as well. His song is lively, spontaneous and decidedly musical, often described as "*per-chic-o-ree*." It is frequently given as the bird is on the wing. The flight is undulating and as the bird rises in a great upward curve, a clear song, with its wild care-free quality, joyously fills the air.

NEST: The nest of the Goldfinch is sometimes found in low bushes or in trees. It is one of the most beautiful structures that may be seen out-of-doors. Fine grass and moss are used for the exterior, while the very lightest of thistle-down is collected for the soft nest lining. Fortunate, indeed, are the little birds who are reared in this truly silken couch. The eggs, three to six in number, are of a pale, bluish white color.

REMARKS: The female Goldfinch is much darker in color. Instead of the black cap and black wings of the male, she is covered with a brownish olive above, and a yellowish white beneath. Indeed, she is much the more modest of the two. This little "Wild Canary," who sings as he flies, is as useful as he is attractive. He eats objectionable weed seeds and other similar food. He is greatly attracted by sun-flower seeds and he would often come very close to our homes if we provided for him. When we see the Goldfinch dipping through the air, and hear his happy "*per-chic-o-ree*," even from a distance we can make no mistake about his identity; for of all the birds that have definite habits, the Goldfinch is most characteristic in his manner of flying.



Goldfinch— $5\frac{1}{4}$ inches

THE RUBY-THROATED HUMMINGBIRD

The only species of Hummingbird that we know in the Northeast is the Ruby-throat. This little whirring jewel comes to us from the South in very early May and departs by the first of October. It is interesting to learn that there are at least five hundred known species of Hummingbirds in the New World. They are found only in North and South America, the greatest numbers being in South America in Ecuador and Columbia, where Dr. Frank M. Chapman writes that they inhabit the Andean regions.

SONG: The Ruby-throated Hummingbird utters only a little "squeak" and thus may be said to possess no true song. Mr. F. Schuyler Mathews has said that this note might possibly mean—"Look out now; don't attempt to catch me by the tail while my head is buried in this morning-glory!" The "humming" sound is made by the rapidly beating wings. Indeed, these wings move so rapidly that they are invisible as the bird hovers in mid-air while investigating some flower.

FOOD: The diet of this Hummingbird consists of tiny insects and also of the nectar of flowers.

NEST: This rare little structure is built upon a horizontal tree limb, quite far from the ground. It is built of the very softest of plant down, covered upon the outside with small bits of lichens and bound to the branch with fibers. This delicate little composition is most difficult to find. Often it is only discovered by accident, perched upon its swaying foundation. The two white eggs, about the size of beans, are incubated and then the two diminutive birds appear in the silken thimble. The entire family could be contained in a spoon.

This little midget with throat of red,
That hums through the air like a bee;
Is it a bird or a fairy instead,
That hovers for mortals to see?
Or is it a flower with silvery wing,
Content to fly though it never may sing?

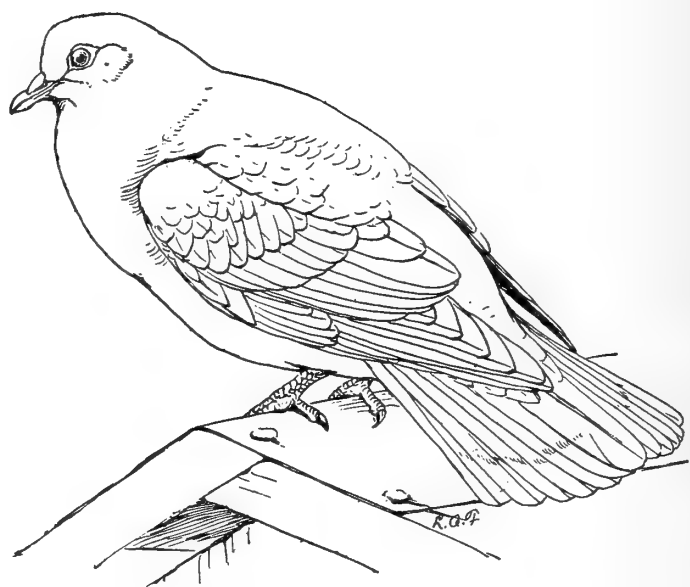
On soft summer days, where the Jewel-weed grows,
This flash from the Tropics may seem,
In its darting and dashing wherever it goes,
To be like the thread of a dream
That journeys as even a dream may do,
To visit the blossoms and taste of the dew.



The Ruby-throated Hummingbirds

Male above, female below

$3\frac{1}{2}$ inches



Common Pigeon



Red Crossbill

BIRD GAMES

There are many different games that may be played to add interest to a study of birds. Some of these are adaptable for out-of-doors and some for the class room. One game that has proven itself to be rather popular, is *a game of bird parts*.

EQUIPMENT: For equipment it is necessary for the instructor to have either a large colored picture or a real specimen of some bird as the Meadowlark which is rather distinctively marked.

RULES: First the instructor calls the attention of the children to the various parts of the bird as outlined upon the chart in this booklet. He then asks the children to stand and calls out such body parts as the crown, the nape, the throat, and the shoulder asking the children to put their hands quickly on the parts of their bodies that are named. After this brief review the instructor holds up a different bird and points to the different parts such as the yellow nape of the Bobolink, the reddish breast of the Grosbeak and asks the children to name quickly the parts as they are indicated, at the same time placing their hands upon these parts as before. The child who makes a mistake is made to keep his hand where it is, and, by process of elimination, with the use of several birds it is often possible to find one child who has alone been undefeated.

BIRDS' NEST GAME

In order to appreciate what wonderful structures birds' nests really are, it is sometimes helpful to try to build a nest.

EQUIPMENT: Let each child gather several handfuls of dried grass, short dead twigs, strips of inner bark, leaves and similar nesting material. These may be brought to the classroom or else the game may be played in the open.

RULES: The instructor should give a brief talk on different types of birds' nests such as the Robins' and Crows'. For this purpose, several real birds' nests as examples would be most useful. The children should be allowed a given time to construct their nests. At the end of this period, it is just barely possible that there may be one nestlike structure in the group. This nest will of course be the winning one. This is one way in which the children may appreciate the true birds' nests.

THE MIGRATIONS OF LOCAL BIRDS

Our local bird life may be divided roughly into two parts: the *Permanent Residents* and the *Transients*. As Mr. Ludlow Griscom has said "It is idle to look for Warblers in January or Ducks in July." We must know which of our birds are with us all the year and which visit us for a short time. The following is a list that will help us to tell *when* to look for different birds at different seasons.

A. PERMANENT RESIDENTS.

In general, the birds that are present during the months of November, December, January and February are to be found hereabouts during the entire year. These are the Crow, several of the Owls, the Song Sparrow, the Partridge, etc. However, we also have winter visitors, such as the Kinglets, the Brown Creeper, the Snowbird and others that return to the north during the warm season of the year.

B. SPRING VISITORS.

1. *March*. During this month a gradual influx of birds is noticed. The following is a list of these bolder visitors.

(Feb. 15 to March 25)

Meadowlark	Purple Grackle
Rusty Blackbird	Fox Sparrow
Red-winged Blackbird	Robin
Green-winged Teal	Bluebird
Kingfisher	Wood Duck
Phoebe	Killdeer Plover
Cowbird	Woodcock
Morning Dove	

2. *April*

(March 25 to April 12)

Pied-billed Grebe	Savannah Sparrow
Blue-winged Teal	White-throated Sparrow
Great Blue Heron	Chipping Sparrow
Wilson's Snipe	Field Sparrow
Piping Plover	Swamp Sparrow
Osprey	Tree Swallow
Yellow-bellied Sapsucker	Yellow Palm Warbler
Vesper Sparrow	Pine Warbler
Ruby-crowned Kinglet	Hermit Thrush

(April 17 to 25)

Bittern	Blue-headed Vireo
Black-crowned Night Heron	Black-and-White Warbler
Clapper Rail	Myrtle Warbler
Virginia Rail	Black-throated Green Warbler
Towhee	Louisiana Water Thrush
Barn Swallow	Brown Thrasher

(April 25 to 30)

Green Heron	Purple Martin
Greater Yellowlegs	Cliff Swallow
Spotted Sandpiper	Bank Swallow
Broad-winged Hawk	Rough-winged Swallow
Whip-poor-will	Yellow Warbler
Chimney Swift	House Wren

3. *May*: This is the best month of the year for observation work if a large list of birds is the thing desired. Birds are now coming northward with a rush, the peak of the migration season is reached, and it is possible to see over 100 species in a single day.

(May 2 to 7)

Solitary Sandpiper	Nashville Warbler
Pigeon Hawk	Blue-winged Warbler
Hummingbird	Parula Warbler
Kingbird	Black-throated Blue Warbler
Crested Flycatcher	Chestnut-sided Warbler
Least Flycatcher	Prairie Warbler
Baltimore Oriole	Northern Water-thrush
Orchard Oriole	Hooded Warbler
Grasshopper Sparrow	Northern Yellow-throat
Rose-breasted Grosbeak	Ovenbird
Tanager	Redstart
Warbling Vireo	Catbird
Yellow-throated Vireo	Wood Thrush
White-eyed Vireo	Veery

(May 9 to 12)

Acadian Flycatcher	Blackburnian Warbler
Red-eyed Vireo	Yellow-breasted Chat
Worm-eating Warbler	Olive-backed Thrush

Magnolia Warbler

Canadian Warbler

(May 10 to 14)

Nighthawk

Cape May Warbler

Bobolink

Bay-breasted Warbler

White-crowned Sparrow

Blackpoll Warbler

Lincoln's Sparrow

Wilson's Warbler

Golden-winged Warbler

Long-billed Marsh Wren

Tennessee Warbler

Gray-checked Thrush

(May 15 to 26)

Yellow-billed Cuckoo

Olive-sided Flycatcher

Black-billed Cuckoo

Yellow-bellied Flycatcher

Wood Pewee

Alder Flycatcher

Indigo Bunting

Kentucky Warbler

Cedar Waxwing

Morning Warbler

4. *June*: The majority of the local birds are nesting during this month and the others have gone on to breeding grounds *further* north.

5. *July*: The breeding and the song seasons are now nearly concluded. The moulting has begun and the woods and fields are quiet in the warm sunlight.

C. AUTUMN TRANSIENTS: Among the first of the birds to leave for the South, the following may be noted:

1. *August*

(August 1 to 30)

Great Blue Heron

Magnolia Warbler

Sora Rail

Bay-breasted Warbler

Olive-sided Flycatcher

Blackburnian Warbler

Golden-winged Warbler

Northern Water Thrush

Tennessee Warbler

Mourning Warbler

Cape May Warbler

Wilson's Warbler

Canadian Warbler

2. *September*: The Southward migration continues.

(September 1 to 10)

Nashville Warbler

Blackpoll Warbler

Parula Warbler

Black-throated Green Warbler

Black-throated Blue Warbler

Connecticut Warbler

(September 10 to 30)

Wilson's Snipe

Olive-backed Thrush

Broad-winged Hawk

Coot

Pigeon Hawk

Savannah Sparrow

White-throated Sparrow

Junco

Palm Warbler

Lincoln's Sparrow

3. *October*: As the insects disappear when the frost arrives, so do the birds, that need this form of food, go Southward. Thus the weather is mainly responsible for the date on which the remaining species leave for the South. An accurate list is hardly possible.

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AN EARLY MORNING WITH THE BIRDS

“Wild birds change their season in the night,
And wail their way from cloud to cloud
Down the long wind.”

One early October morning I lay on the hard-packed ground, longing for the sun to rise. I had slept here all night long that I might see the birds at dawn. Deceived by the warmth of the previous day, I had not brought enough blankets and was therefore exceedingly uncomfortable in the cold breeze.

At the foot of the hill upon which stood my camp, there was a spring-fed pond. Dammed at one end, it comfortably filled the head of a small valley. Leading from it was a broad, grassy tidal flat that receded from the visible Long Island Sound. To shore birds this marshy place was an ideal feeding spot.

Over the dark, motionless surface of the lake there floated a fog bank, suspended about twenty feet from the surface. More vapor was slowly growing into a gigantic mushroom.

As I watched this increasing filmy mantle, I saw first one and then another gray shape pass into it and disappear, only to emerge again at some other point and vanish in the darkness of the oak-lined shore. At first I could not imagine what these ghost-like shapes were, and then, just as I had about decided that they were the result of a freakish wind playing with stray cloudlets, there came a gruff “quawk, quawk, quawk,” taken up by one and then another of the shapes until the place echoed with hoarse cries. I realized that the Black-crowned Night Heron was taking his final morning sail preparatory to going to roost in some nearby tree for the day. Like the owl, he preferred the night for his activities.

Gradually the noise subsided as the Herons settled on various branches. The mist above the pond began to disappear, and the small, shapeless clouds far up in the sky took on a suggestion of color. Now was the time to arise. In a very little while the woods would be filled with flying, feeding birds, and the best time of day for bird observation would be at hand. Yet so cold was I that it was impossible to move a limb. Several times, off to one side, a faint-voiced little White-throated Sparrow gave a feeble

imitation of his beautiful spring-and-summer song. It was as though his vocal organs had become less pliant through disuse and exposure to the cold.

What a brave little singer he is, even though his efforts are not always equally repaid. I think it is partially what Hudson would call the "human note" that so endears the White-throat's song to me. There is truly an intimate quality in the first sustained note of his song. But in the final, high and infinitely sweet tones there is a suggestion of a song that is too pure to be voiced by anything that is bound to the earth. Many have been the hot summer days when, tired and pack-weary, I have paused for a moment to rest at some bramble-covered clearing in the deep woods, and that cheery little forest voice of the Peabody bird, coming unexpectedly from some unseen branch, would refresh me as much as a drink at some cool spring. I look forward to his singing from one year to the next.

A massive white oak spread its powerful branches at least one hundred feet above my head. It was a majestic and beautiful living monument to a mighty nature. Some of the topmost limbs seemed to reach up and disappear in the sky, so perfectly did their pale gray bark blend with the early morning light. For some time I listened to the soft rustling of the wind among its myriad drying leaves. Then very subtly from the tree top there came a different sound, which impressed itself upon my consciousness as would the faint perfume of a distant flower bed slowly approached. Gradually it increased until the leafy whispering became almost inaudible, and the air was filled with an indescribable, high-pitched musical breathing. It was as though countless tiny creatures were conversing a great way off.

Turning squarely on my back, I for a moment saw nothing in the leafy midst so far above. As my eyes became more properly focussed, however, they distinguished some small objects of about the same size. My glasses were safely stored in the heel of a large shoe close at hand. Forgetting the chill air, I uncovered my chest and arms long enough to take out the binoculars.

There in the tree top I saw a moving mass of very small birds that were flying from one twig to another with scarcely any pause in their activities. No sooner would one move out of sight than another would come flying into the tree and take his place. The entire gathering was ever going southward. A few of the number

came down to the lower branches where their identity could be more readily determined. I realized that I was witnessing the fall migration of a large group of American warblers.

Among the most prominent of the small birds were the female and young Redstarts, who flashed into view many times. The yellow on the outer tail feathers was plainly visible as they sped here and there after any insect that might be about. The Myrtle Warbler, with his four yellow spots on crown, rump, and on each side of his breast, was very largely represented in the tree top. The dainty little Yellow Warbler and the Black-throated Blue were also there. What a multitude they were and what a long fearsome journey they had yet to travel! It would be hard to enumerate all of the various dangers that beset these little birds as they fly mile after mile through the air at night, and more particularly as they rest and feed near the ground during the day.

Even as I watched, a marauding Screech Owl glided overhead on noiseless wings. Instantly the twittering died, only to be recommenced after the Owl had passed quite harmlessly by.

What busy little creatures these birds were! They searched every leaf and let no morsel of food, insect or plant, escape. How well they knew that birds that fly in the night must feast in the daytime. They were with me for about fifteen minutes, and then, as gradually as they had come, so did they pass on until at last not a single one was to be seen.

For some time I lay there trying vainly to warm myself after my warbler exposure. Not a sound was to be heard—even the wind had become silent. Then suddenly there came from not very far a call of "Teacher, Teacher, *Teacher*, TEACHER." Never before or since have I heard the "teacher bird" announce himself so late in the season. He was also on his journey southward. His smaller brother warblers took to the tree tops but he, although of the same family, preferred the ground where he might look among the leaves for choice bits of food. This bird is known by a diversity of names. He is called by many the "oven-bird", due to the Dutch-oven-like structure of his nest; but to me he is, as he was to John Burroughs, the "Teacher Bird."

When I go off alone into the woods I want some sort of "burglar alarm" to warn me of strangers in camp on windless nights. I resort to a very ancient but effective practice. By gathering many armfuls of dry, dead leaves and piling them all about my

tent I feel fairly sure that no prowler can take me by surprise. I had provided myself with just such an alarm on this overnight hike, and was made aware by a slight rustling close to my tent that I had a caller of some kind. For a moment I thought it was a gray squirrel, but then the nature of the noise seemed different and I was puzzled as to who my visitor might be.

In a moment I found out. A most beautiful, clean-cut little Wood Thrush came hopping along before my tent. He looked very cold, and for that reason aroused my sympathy at once. His shapely brown head was tucked down between the shoulder blades as far as possible. So cold was he that he did not even look for food, but with no apparent thought as to direction, moved along evidently just to keep warm. It gave me a mental picture of myself as I would be when I arose. My main object would be to get the fire going so as to keep warm; food would come later.

The Thrush passed out of my sight without having paid any attention to me. I thought him gone for all time; but no, in a moment he reappeared and to my intense delight came stalking straight towards the tent, still in the frozen manner.

Suddenly, I am positive, he saw me. His head was taken from between the shoulders, and every part of the bird seemed instantly on the alert. The contrast was startling. Here was a most active and intelligent creature where before had been one that looked remarkably dull and stupid.

Slowly, and with the utmost caution, he advanced until not more than two feet separated us. There he stopped and literally looked me up and down. Not a sound nor a movement did I make, so fearful was I of frightening my guest away. What a remarkably clean white breast he had, and how distinct were the round black spots with which it was speckled! Here was the woodland brother of the Robin and the Bluebird right where I could put my hand on him. After he had become satisfied that I was harmless and was no more interesting than any of the queer-looking fallen logs or rocks of the forest, he turned his back, rather rudely, and left the tent.

It was then that I arose and went about my fire making. If the birds were so anxious to have me see them that they were forced to come into my tent I could no longer refuse them. A hasty breakfast over, I started off into the woods, glasses in hand, in quest of the birds that were calling.

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